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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,601

09/08/2006

Richard Blackmore

V-046

1536

7590  
David McEwing  
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Houston, TX 77223

04/27/2009

EXAMINER

KENNEDY, TIMOTHY J

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,601	<b>Applicant(s)</b> BLACKMORE, RICHARD	
	<b>Examiner</b> TIMOTHY KENNEDY	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 68-90 is/are pending in the application.
- 4a) Of the above claim(s) 79-90 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 68-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2005 and 05 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/2/2005</u> .   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) s 68-78, drawn to a method of curing concrete.

Group II, claim(s) 78-90, drawn to the concrete product.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the common technical feature in all groups is an electric heating circuit. This element cannot be seen as a special technical feature under PCT Rule 13.2 because the element is shown in the prior art. U.S. Patent 828,976 (page 1, lines 73-88) teaches creating an electric circuit in concrete for curing, as claimed in claims 68 and 79.

3. During a telephone conversation with David McEwing on 4/13/2009 a provisional election was made without traverse to prosecute the invention of Group I, claims 68-78. Affirmation of this election must be made by applicant in replying to this Office action. Claims 79-90 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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4. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

***Information Disclosure Statement***

5. The information disclosure statement filed 12/2/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document (JP 05-318452); each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

***Drawings***

6. Figures 1A, 1B, 2, 2C, 3A, 3B, and 3C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 68-70, 72, 73, and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (U.S. Patent 828,976, already of record). Regarding claim 68, Schneider teaches:

10. A method of curing concrete utilizing at least one heating component within uncured concrete by energizing the heating component with electrical power to resistively heat the concrete to a first temperature and then modifying the electrical power to achieve a different temperature.

11. Throughout the specification (page 1, lines 21-112 through page 2, lines 1-66) Schneider teaches using heating components in uncured concrete, and applying current to the components to cure the concrete. This would inherently involve the resistance heating of said heating components.

12. With regards to the temperatures Schneider teaches that the current applied to the heating components can be varied (page 2, lines 1-10), but does not explicitly say that different temperatures can be reached by altering the current.

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13. It would have been obvious to one having ordinary skill in the art at the time the invention was made that when the current changes in a resistive heating element so does the temperature.

14. Regarding claim 69:

15. The amount of electrical power is modified to achieve a rate of compressive strength gain of the concrete.

16. This is obvious in any concrete curing process. As the concrete cures the compressive strength of the system will increase.

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made that the variable heating process of Schneider would inherently achieve a rate of compressive strength gain in the concrete.

18. Regarding claim 70, Schneider further teaches:

19. The amount of electrical power is modified to achieve a rate of concrete cure.

20. As previously mentioned Schneider teaches that the current applied to the heating components can be varied, thus it would obviously be able to control the rate of cure by modifying the applied current to achieve different temperatures, as previously discussed.

21. Regarding claim 72, Schneider further teaches:

22. The heating component provides structural reinforcement to the concrete (page 1, lines 82-88)

23. Regarding claim 73:

24. Heating the concrete at a substantially uniform rate

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25. Schneider, as previously discussed, teaches that the current applied to the heating components can be varied, but does not explicitly state that the heating would be at a substantially uniform rate.

26. It would have been obvious to one having ordinary skill in the art at the time the invention was made that a uniform cure could be obtained by adjusting the current as necessary.

27. Regarding claim 76:

28. See remarks regarding claims 68 and 70

29. Regarding claim 77:

30. See remarks regarding claims 68 and 69.

31. Regarding claim 78:

32. See remarks regarding claim 68.

33. Claims 71, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider, in view of Mattus (U.S. PGPub 2003/0200903).

Regarding claim 71, Schneider does not teach:

34. The heating component comprises carbon fibers

35. In the same field of endeavor Mattus teaches using carbon fiber to help make the concrete electrically conductive, thus controlling the cure of the concrete (Abstract).

36. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the carbon fibers of Mattus, using the Schneider method,



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since doing so would allow for the entirety of the concrete to become electrically conductive, thus helping further control the cure.

37. Regarding claim 74 Schneider does not teach:

38. The concrete contains heat responsive additives to activate a hydration reaction

39. In the same field of endeavor Mattus teaches using additives to control the cure, by activating using electricity (thus an inherent increase in temperature) (Abstract)

40. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the additives of Mattus, using the Schneider method, since doing so would allow for control of the timing of the concrete cure.

41. Regarding claim 75, Schneider does not teach:

42. The concrete contains additives to retard a hydration reaction.

43. In the same field of endeavor Mattus teaches retardants (paragraph 0013-0022)

44. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the retardants of Mattus, using the Schneider method, since doing so would allow for control of the timing of the concrete cure.

### ***Conclusion***

45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

46. U.S. Patents 1989736, 2133810, 2643434, 2841856, 3907951, 4560428:  
electricity and molding/curing

47. U.S. Patent 4599211: cure strength

48. U.S. Patent 4627998: carbon fiber

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49. U.S. Patent 5846317: hydration

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY KENNEDY whose telephone number is (571) 270-7068. The examiner can normally be reached on Monday to Friday 9:00am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571) 272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art  
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tjk

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